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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,563	10/16/2003	Haruo Moritomo	FUJ 20.560 (100794-00467)	7132

26304 7590 03/05/2007	EXAMINER
KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585	POLTORAK, PIOTR

ART UNIT	PAPER NUMBER
2134	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,8,11-13 and 15-17* is/are rejected.

7)☒ Claim(s) *4, 6-7, 9-10 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

KAMBIZ ZAND
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *10/16/03*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 have been examined.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan No. 2002-301317 filed on 10/16/2002.

Drawings

3. The drawings are objected to because Fig. 1 is not labeled as a prior art figure.

4. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure. A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. The abstract of the disclosure is objected to because it appears that the abstract unnecessarily contains the title of the invention.

Claim Objections

6. Claims 1-17 are objected because of lack of consistency: Applicant should select either "said" or "the" article and using the article consistently through out all the claims, select either singular or plural form of nouns, e.g. "a received encrypted packets" in 16 iii. b., ensure consistent use of capitalization, e.g. preferably use a lower case "if" in claim 9 etc.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2, 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.

8. The terms "input I/F" and "output I/F" units in claim 2 are not understood. For purposes of further examination the terms treated as input and output units.

9.   It is not clear whether the phrase "said cryptographic tunnel is" in claim 4 addresses

"the first cryptographic tunnel" or "the second cryptographic tunnel". In light of claim

6 that directly depends on claim 4 the phrase is treated as though the limitation is

directed towards both of the tunnels: "said cryptographic tunnels are".

10. Claims 16 and 17 lack antecedent basis that can introduce ambiguity to the claim

language. For example, "the encrypted received packets" cited in 16 a. ii. is followed

by "a received encrypted packets" in 16 iii. b., then by "the received encrypted

packets" recited in 16 iii. c. The applicant should amend the limitation to clearly

underline the subject matter corresponding to the specification (e.g. clarify whether

"the encrypted received packets" recited in are received via a second or a first

cryptographic tunnel).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-3, 5, 8 and 11-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Applicant Admitted Prior Art (APA) in view of Borella (U.S. Pub.

20030229697) or alternatively in view of Bendinelli (U.S. Patent No. 20020026503).

As per claim 17, APA discloses multi-path cryptographic communication involving a start node, repeating node device, end node and a terminal. In particular APA discloses cryptographic communication between terminals 11 and 31 (Fig. 1), wherein an intermediate node (router 2) forwards re-encrypted packets to the next point of the 11-31 path destination (The specification, pg. 2, last paragraph). The last paragraph of page 1 and the first paragraph of page 2, APA discloses that the encrypted communication between two parties is achieved by forming VPN tunnel, such as IPSec and that a path incorporating a several intermediate nodes results in a several tunnels formed between adjacent communication parties.

This reads on "receiving packets for a terminal at a first node, transmitting the encrypted received packets to a repeating node over a first cryptographic tunnel, decoding the encrypted received packet at the repeating node and transmitting the encrypted decoded-packet to an end node.

12. As per claim 1 and 16, an ordinary artisan would recognize that communicating packets from one entity to another over VPN (especially in IPSec environment) requires an element that enables formation of a tunnel, which also inherently requires units enabling receipt and transmission of packets. Furthermore, the multi-node communication in the environment where data is decrypted and encrypted (as disclosed by APA) requires units enabling a receipt and transmission of encrypted/re-encrypted packets. Furthermore, as per claim 2, an ordinary artisan would recognize that a device communicating in a network environment receiving and transmitting data must comprise and input and output units and in case of

discussed above IPSec environment, the IPSec processing unit. Lastly, devices

performing repeating functions, such as routers discussed on page 1 (the

specification) by APA comprise routing tables, thus a routing unit.

13. Although APA discloses connection between a start node and an end node going

through an intermediate node, APA does not disclose a third, direct tunnel

connection between the start and end nodes.

Borella discloses forming a direct ("second cryptographic tunnel") connection

between a start node and an end node, wherein the second cryptographic tunnel

does not connect through any intermediate node (Borella, [0062-0063]).

It would have been obvious to one of ordinary skill in the art at the time of applicant's

invention to form. One of ordinary skill in the art would have been motivated to

perform such a modification given the benefit of route optimization (Borella, [0060]).

Alternatively, Bendinelli discloses forming a direct ("second") tunnel between a start

node and an end node (Bendinelli, [0134-0136]). It would have been obvious to one

of ordinary skill in the art at the time of applicant's invention to form a direct tunnel

between a start node and an end node as disclosed by Beninelli given the benefit of

data privacy (Bendinelli, [0007]).

14. As per the limitation "when traffic of the encrypted received packets has exceeded a

first threshold value", the examiner points out that Borrella as well as Bendinelli do

not put any restriction on forming the direct ("second") tunnel and nothing in the

limitation does not suggests that the exceeding a first threshold value is the

prerequisite to forming the "second cryptographic tunnel". In other words the packet

traffic threshold would not affect the Borella and Bendinelli's inventions since it simply would have been a subset of overall architecture presented by Borella and Bendinelli. Thus, forming the direct traffic "when traffic of the encrypted received packets has exceeded some threshold would simply an obvious variation of Borella and Bendinelli's invention, in particular since Bendinell's aims to balancing traffic load, the concept closely correlated with traffic thresholds.

Furthermore, the examiner points out that the "second cryptographic tunnel" is not created upon receiving the first set of packets, but rather it is formed in the proceeding steps involving the next set of packets, which could be read on a "threshold value".

15. APA addresses claim 3 limitations on page 3 in the specification. However, even if APA did not disclose the limitations are implicit. Network entities (a node) must monitor traffic in order to detect whether the data directed to an entity has been received, tunnel connections utilizing encryption mechanisms must at least keep track of the keys associated with communication sessions, and they provide (in particular IPSec) variety of secure options that must be defined in order for the entity to know which option should be selected (see Stallings pg. 402-431, for example). Finally, as disclosed above, entity routing traffic (routing devices) must have routing tables.

16. As per claims 5, 8 and 11-13 and 15 Official Notice is taken that it is old and well-known practice to provide a plurality of connection protocols, including tunnel protocols (e.g. U.S. Patent No. 6920503) and to define policy information, including

security policy information (e.g. U.S. Patent No. 7171685). One of ordinary skill in

the art at the time of applicant's invention would have been motivated to employ a

plurality of connection protocols and security policy information given the benefit of

compatibility with various devices and in order to provide desired security

configuration. A connection session reads on a link number and implementation and

a start and end point IP address must be recognized in order to select the correct

encryption/decryption and the security protocol. A true/false condition inherently

implemented in a searching process reads on a flag. Lastly, establishing the direct

communication tunnel and using the direct tunnel reads on switching.

communication

Conclusion

Claims 4, 6-7, 9-10, 14 are rejected as being dependent on the rejected claims 1-

3. However, claims 4, 6-7, 9-10, 14 would overcome the art of record if they were

presented in the independent form.

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

Larson (U.S. Pub. No. 20040103205),

Tuomenoksa (U.S. Patent No. 7028334).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Peter Poltorak whose telephone number is (571) 272-

3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/1/07

KAMBIZ ZAND
PRIMARY EXAMINER